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Proposed Plan for Magazine Bravo in Area 6A Libertyville Training Site Vernon Hills, Illinois

January 2003

INTRODUCTION

The U.S. Navy, the lead agency for the environmental restoration at the Libertyville Training Site, is issuing this **Proposed Plan** for Magazine Bravo in Area 6A. Magazine Bravo is one of three former NIKE missile magazines located within Area 6A at the Libertyville site. This plan is being issued so the public can comment on the Navy's recommendation of no further response action for this site. This Proposed Plan was prepared according to published guidelines in three pieces of environmental legislation: CERCLA, SARA, and the **National Contingency Plan**. The Navy, in consultation with the U.S.EPA and IEPA, will not issue a final decision until public comments are considered.

To help you understand this fact sheet:

Acronyms in the text are defined as follows, listed in the order in which they appear.

CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (1980)
SARA	Superfund Amendments and Reauthorization Act (1986)
U.S.EPA	United States Environmental Protection Agency
IEPA	Illinois Environmental Protection Agency
BRAC	Base Closure and Realignment
LTS	Libertyville Training Site
NAS	Naval Air Station
DoD	Department of Defense

Terms that appear in bold are defined in the glossary on page 7.

This plan highlights key points from the **Action Memorandum and Site Evaluation and Closure Report**, as well as other related documents that are available to the public in the **BRAC Information Repositories**. These BRAC documents can be found at the Vernon Area Public Library, Vernon Hills Village Hall, and in the **Administrative Record** at the Great Lakes Naval Training Center in Great Lakes, Illinois (see page 6).

PUBLIC COMMENTS

The U.S. Navy relies on public comments to ensure that community concerns have been considered. To encourage public participation in making the final decision, the Navy will accept written comments from January 24 to February 24, 2003. A public hearing will be held on January 28, 2003 at 7 p.m. in the Vernon Hills Village Hall. Representatives from the Navy, U.S.EPA, and IEPA will be available to discuss the work conducted at Magazine Bravo and answer questions from the public. Comments will be summarized and addressed in the **Decision Document** for this site. You can use the form at

This fact sheet includes:

- ▶ Information on the public's role in helping the Navy make a final decision pg. 1, 6
- ▶ Site background information pg. 2
- ▶ Evaluation criteria for remedial alternatives pg. 5
- ▶ Rationale for no further action pg. 6

the back of this fact sheet to write down your comments or request additional information. All comments should be postmarked by February 24, 2003.

SITE BACKGROUND

The 164-acre Libertyville Training Site (LTS), also referred to as the NIKE missile site, is approximately 30 miles north of downtown Chicago. The LTS was closed in 1993 as a result of the Base Closure and Realignment Act of 1990. The Navy purchased the LTS in 1945 for use as an auxiliary airfield and training site for the former NAS Glenview. In 1954, the LTS was transferred to the Army and the site was used as a NIKE missile facility until 1963. In 1972, the Navy resumed control of the LTS, planning to use the area for additional housing for NAS Glenview. From 1971 until the fall of 2000, the Federal Aviation Administration (FAA) used six acres for an aircraft navigational aid facility. In 1999, the Navy transferred 3.67 acres of the LTS to the FAA for construction of a new navigational aid facility, which became operational in the fall of 2000. As of October 2001, all of the LTS property has been transferred from the Navy to the FAA or the community, with the exception of Area 6A.

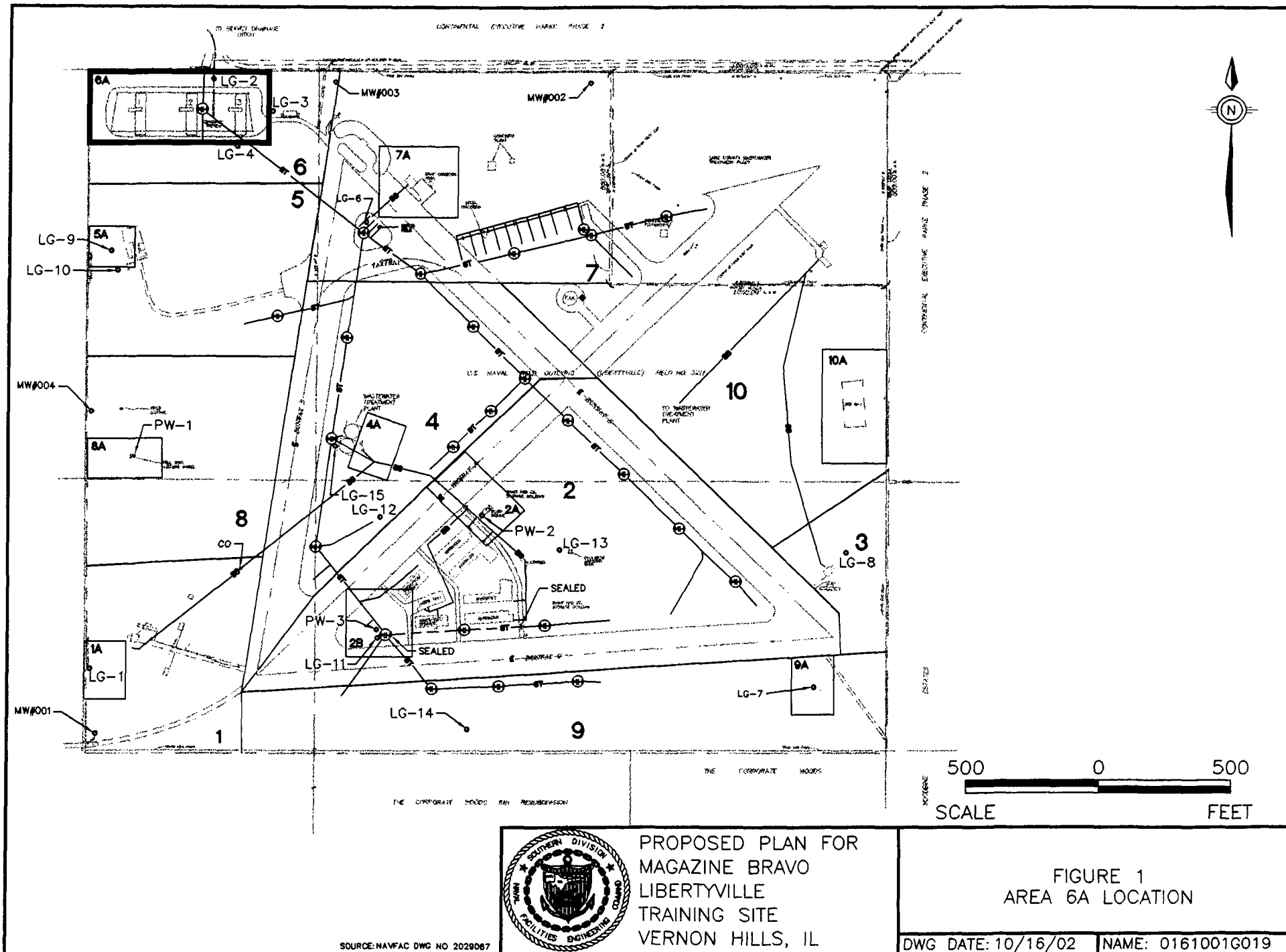
Area 6A contains the former C-94 Launch Area, which included three NIKE missile storage magazines. The three abandoned underground magazines were identified as Magazines Alpha, Bravo, and Charlie. During the site's use by the Army, NIKE missiles were stored in the magazines, but were never deployed. The surface of Area 6A was paved, with a storm water drainage ditch around the perimeter of the magazines. The Navy completed demolition of the three magazines and pavement in September 2002. Figure 1 shows the location of Area 6A within the former Libertyville Training Site.

SITE CHARACTERISTICS

Area 6A was investigated during the Gray Sites Investigation and the Gray Sites Addendum Investigation. During these investigations, soil impacted by **metals** and **polynuclear aromatic hydrocarbons (PAHs)** was detected and subsequently excavated and disposed of offsite under a non-time critical removal action. This removal action was presented for public review and comment in the Proposed Plan issued in June 2001. During the original investigations, Magazine Alpha was empty and accessible for entry, inspection, and sampling. Magazines Bravo and Charlie were flooded and inaccessible until June 2001, when the Village of Vernon Hills began removing the water from the magazines. During pumping, petroleum product was discovered in the last 2 to 3 feet of water. After the discovery, pumping operations were shut down and the Navy returned to the site to address the newly identified environmental issues.

In July 2001, soil and groundwater samples were collected from backfill around the magazines. The analytical results indicated that PAHs exceeded **Libertyville screening levels (LSLs)** in the backfill soil. The PAHs were thought to be the result of waterproofing material scraped off the exterior magazine walls during sampling. Based on these findings and discussions with the Base Realignment and Closure Cleanup Team (BCT), the Navy decided to collect more samples to assess the impact of this material or other potential sources of contamination.

Further investigation of soil and groundwater around Magazines Alpha, Bravo, and Charlie was conducted from April to July 2002. The results indicated that a zone of PAH-impacted soil, with exceedances of the LSLs, existed south of Magazine Bravo at depths ranging from 12 to 17 feet below the ground surface. The source of the PAHs is unknown, but is thought to be associated with construction of the magazines. Analytical results for soil and groundwater around the remainder of Magazine Bravo and around Magazines Alpha and Charlie indicated that the constituents of concern were below the LSLs. Based on these results, the Navy, with the concurrence of the U.S.EPA and IEPA, decided to conduct a removal action south of Magazine Bravo.



SCOPE AND ROLE

The site investigation indicated that remediation of subsurface soil was required south of Magazine Bravo. As the final response action to be taken, the Navy proposed a time-critical removal action due to the potential threat to human health and the environment under CERCLA, and due to the Village of Vernon Hills' redevelopment schedule. The U.S.EPA and IEPA concurred with the Navy's proposal to conduct a time-critical removal action during a conference call in June 2002. The Action Memorandum and Site Evaluation provides documentation for the removal action.

SUMMARY OF SITE RISKS

Because of the time-critical nature of this removal action, a baseline risk assessment was not performed. However, concentrations of PAHs in the soil at Magazine Bravo were compared to the LSLs. LSLs are cleanup levels based on risk-based standards that protect human health. A risk range of 10^{-6} , meaning that the increased chance of additional cases of cancer is no more than one in one million people, is considered acceptable for protection of human health under a residential use scenario. The LSLs are protective of a residential land use scenario and also are protective of site trespassers because they are derived using more conservative residential assumptions for contaminant exposure duration and exposure frequency. To ensure elimination of risk to future site users, the Navy removed all soil south of Magazine Bravo in which PAH concentrations exceeded LSLs.

Groundwater is not considered a pathway of environmental concern because the investigations indicated it has not been impacted by activities at Area 6A.

REMEDIAL ACTION OBJECTIVES

The goal of the site cleanup was to reduce soil contaminants to levels that protect human health. Under BRAC, most of the former LTS, including Area 6A, is being transferred to local school districts and the Village of Vernon Hills. The proposed future use of Area 6A is storm water management and recreation. The Navy chose to remediate the property to residential standards, which are more protective of human health than other land-use categories.

REMEDIAL ALTERNATIVE

Because cleanup of the site was conducted as a time-critical removal process, only one alternative, soil excavation and disposal, was considered. The selected alternative meets the nine evaluation criteria described on page 5.

IMPLEMENTATION

Timing of the remediation process was critical factor for the site; therefore, the remedial action was completed as a time-critical removal action under CERCLA.

The major components of the action were:

- ▶ Excavation of contaminated soil presenting an unacceptable risk to future site users.
- ▶ Offsite disposal of excavated soil as special waste in a permitted landfill.

- ▶ Collection of soil samples to confirm that the removal met established cleanup goals.
- ▶ Site restoration, which included backfilling the excavation with clean soil, followed by seeding and mulching the backfilled area.

The time-critical removal action was conducted south of Magazine Bravo from September 3 to October 11, 2002. Under the direction of the Navy, CH2M Hill Constructors, Inc. removed approximately 1,080 tons (720 cubic yards) of contaminated soil. The removed soil was properly disposed of in a permitted landfill and replaced with uncontaminated backfill. The backfilled area was seeded and mulched to prevent erosion. Details are summarized in the Closure Report.

Evaluation Criteria	Overall Protection of Human Health and the Environment
In selecting a preferred remedial alternative, the Navy uses the criteria shown here.	Assesses degree to which the alternative eliminates, reduces, or controls health and environmental threats through treatment, engineering methods, or institutional controls.
The first two must be met before an alternative is considered further.	Compliance with Applicable or Relevant and Appropriate Requirements
The next five are used to further evaluate options.	Assesses compliance with federal/state requirements.
The final two are then used to evaluate the remaining options after comments have been received from the community, U.S.EPA, and IEPA.	Cost
	Weighs remedial alternative benefits against the implementation cost.
	Implementability
	Refers to the technical feasibility and administrative ease of using the remedial alternative.
	Short-Term Effectiveness
	Potential impacts of construction or implementation of the remedial alternative in the process of achieving cleanup goals.
	Long-Term Effectiveness and Permanence
	Degree to which a remedial alternative can maintain protection of health and environment after cleanup goals have been met.
	Reduction of Toxicity, Mobility, or Volume Through Treatment
	The treatment's expected performance in reducing nature, movement, or amount of contaminant(s).
	State Acceptance
	Consideration of state's opinion of the preferred remedial alternatives.
	Community Acceptance
	Consideration of public comments.

SUMMARY OF RESIDUAL SITE RISKS

Results of confirmation sampling, presented in detail in the Closure Report, indicated all contaminants of concern have been reduced to levels below human health risk-based cleanup requirements for residential property. Therefore, the site is suitable for residential/unrestricted reuse.

RECOMMENDATION OF NO FURTHER RESPONSE ACTION _____

Because the remaining contaminants at Magazine Bravo do not pose unacceptable risk, no further response is necessary to protect human health and the environment. The documents that support this recommendation are in the Administrative Record and Information Repositories for the Libertyville Training Site.

We encourage you to review and comment on this Proposed Plan. Refer to the Action Memorandum and Site Evaluation and Closure Report at the locations listed below for additional information.

SUPPORT AGENCY COMMENTS _____

The U.S.EPA and IEPA have reviewed this Proposed Plan, the Action Memorandum and Site Evaluation, and the Closure Report and support the Navy's recommendation of no further action at Magazine Bravo.

COMMUNITY PARTICIPATION _____

Background and other information on the environmental program (including investigation reports, work plans, and a community relations plan) can be found in the Administrative Record and Information Repositories established for the public by the Navy. The Administrative Record and Information Repository can be viewed at the locations listed below.

Great Lakes Naval Training Center
201 Decatur Avenue
Great Lakes, Illinois 60088
847-688-5999

Vernon Area Public Library
300 Old Half Day Road
Lincolnshire, IL 60069
847-634-3650

Vernon Hills Village Hall
290 Evergreen Drive
Vernon Hills, IL 60061
847-367-3700

Mon.-Fri. 9 a.m. to 3 p.m.

Mon.-Thurs. 9 a.m. to 9 p.m.
Fri.-Sat. 9 a.m. to 5 p.m.
Sun. 12 noon to 5 p.m.

Mon.-Fri. 8:30 a.m. to 5 p.m.

GLOSSARY

This glossary defines terms used in this Proposed Plan. The definitions apply specifically to this Proposed Plan and may have other meanings when used in different circumstances.

Action Memorandum and Site Evaluation: A document that summarizes the results of an investigation of soil and/or groundwater and presents the proposed cleanup remedy for a site.

Administrative Record: The collection of environmental documents, available for public review, that chronicles the decision-making process leading to a final remedy.

Closure Report: A document that summarizes cleanup activities for a site and evaluates residual risk to human health and the environment.

Decision Document: A public document that explains which remedial alternative will be used at a site. It is based on information and technical analysis generated during the Site Investigation and Removal Action and considers public comments and community concerns.

Information Repository: A public collection containing information, technical reports, and reference documents for a site.

Libertyville Screening Levels (LSLs): Cleanup levels based on the Illinois Tiered Approach to Corrective Action (TACO) standards for the incidental ingestion, inhalation, and soil to groundwater migration exposure pathways and the U.S.EPA Region Preliminary Remedial Goals (PRGs) for residential land use. For each chemical, the TACO and PRG values were compared with each other and the lowest (most conservative) value was selected as the LSL. The TACO standards and PRGs are generally based on human health risk of 10^{-6} , meaning that the increased chance of additional cases of cancer is no more than one in one million people. In cases where TACO or PRGs are not based on risk, the values used are lower than the risk-based values and thus, are more conservative.

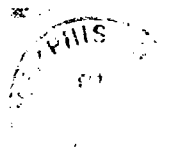
Metals: Metals are naturally occurring elements in the earth, characterized by their luster and ability to conduct heat and electricity. Exposure to some metals, such as lead, can have a toxic effect, while other metals such as iron and potassium are essential to the metabolism of animals and humans.

National Contingency Plan: Regulations which implement CERCLA provisions for responding to releases of oil and hazardous substances.

Polynuclear Aromatic Hydrocarbons: A class of organic compounds having multiple benzene-ring structures. They occur in petroleum products as well as in coal and coal tar.

Proposed Plan: A public participation requirement in which the lead agency summarizes for the public the evaluation of remedial alternatives, the preferred cleanup strategy and the rationale for the preference. This document must actively solicit public review and comment on all alternatives under consideration.

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**MAGAZINE BRAVO
LIBERTYVILLE TRAINING SITE
PUBLIC COMMENT SHEET**

USE THIS SPACE TO WRITE YOUR COMMENTS

Your input on the Proposed Plan for Magazine Bravo at the Libertyville Training Site is important to the Navy. You may use the space below to write your comments, then fold and mail it to the address listed below by February 24, 2003. Attach additional pages as needed.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Name: _____

Address: _____

Phone #: _____

Please mail or fax comments to:

Commander
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